

REMARKS

Applicants respectfully request entry of the amendments and remarks submitted herein. Claim 1 has been amended herein to clarify that the isolated polypeptide has elongase KCS activity.

Claims 1, 2 and 8-11 are currently pending. Reconsideration of the pending application is respectfully requested.

The 35 U.S.C. §112 Rejections

Claims 1, 2, and 8-11 remain rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner continued to assert that the specification does not describe a genus of variants for the third polypeptide segment (i.e., having at least 40% sequence identity to SEQ ID NO:4) and there is no disclosure of any particular structure to function or activity relationship within this genus. According to the Examiner, due to the lack of description on the structure-to-function relationship of the third polypeptide segment and the lack of representative species encompassed by the claims, Applicants have failed to sufficiently describe the claimed invention. This rejection is respectfully traversed.

As submitted previously, Applicants' specification discloses how to determine percent sequence identity (see, for example, page 10, line 18 through page 11, line 25); embodiments of the third polypeptide segment having particular residues or sequence motifs (see, for example, page 12, lines 4-23); and eighteen different examples of polypeptides that have a third polypeptide segment having at least 40% sequence identity to residues 115-506 of SEQ ID NO:4 (e.g., the even numbered sequences shown in SEQ ID NOs: 8-42 have a sequence identity of 54% up to 100% relative to residues 115-506 of SEQ ID NO:4). It is submitted that the present specification provides adequate written description for the claimed third polypeptide segment.

With respect to the Examiner's comments regarding structure and function, and in order to expedite prosecution, claim 1 has been amended to recite the functionality of the entire polypeptide. With respect to the individual polypeptide segments, while the first polypeptide

segment is associated with membrane anchoring and the second polypeptide segment is associated with substrate specificity, the third polypeptide segment itself is not associated with a necessary functionality but can contain a number of conserved residues (see, for example, page 9, line 16 through page 10, line 17 and page 11, line 26 through page 12, line 23). Applicants note that structural limitations are not a requirement of written description but are one way by which written description can be demonstrated. For example, according to the Written Description Guidelines, "[a]lthough structural formulas provide a convenient method of demonstrating possession of specific molecules, other identifying characteristics or combinations of characteristics may demonstrate the requisite possession... See *Lockwood*, 107 F.3d at 1572, 41 USPQ2d at 1966." Based on the Written Description Guidelines as well as the amendments herein to claim 1, it would be improper for the Examiner to maintain a written description rejection based simply on the lack of structure-function relationship with respect to the third polypeptide segment.

In view of the remarks herein, Applicants respectfully request that the rejection of claims 1, 2, and 8-11 under 35 U.S.C. §112, first paragraph, be withdrawn.

CONCLUSION

Applicants respectfully request allowance of claims 1, 2 and 8-11. Please apply the \$3160 in fees (\$810 RCE fee and \$2350 Extension of Time fee) and any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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